APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/627,248	07/28/2000	Donnie V. Savage	CISCP541	2370

26541 7590 10/28/2004		EXAMINER
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12930 SARATOGA AE. SUITE D1		
SARATOGA, CA 95070		

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _07 September 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24 and 26-36_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-24 and 26-36_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

BOB PHUNKULH   10/26/04
PRIMARY EXAMINER

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last

Office action is persuasive and, therefore, the finality of that action is withdrawn.

5

Claim Objections

Claims 26-30 are objected to because of the following informalities:

Claims 26-30 at line 4 of all claims states "limiting the amount". Since there is no

antecedent basis for "the amount" it is suggested that line 4 of claims 26-30 be changed

10   to --limiting an amount--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

15   (a) A patent may not be obtained though the invention is not identically disclosed or described as set
            forth in section 102 of this title, if the differences between the subject matter sought to be patented and
            the prior art are such that the subject matter as a whole would have been obvious at the time the
            invention was made to a person having ordinary skill in the art to which said subject matter pertains.
            Patentability shall not be negatived by the manner in which the invention was made.
20

Claims 1, 2, 4, 6-13, and 19-21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Meier et al. (U.S. Patent 5,394,436) in view of Natarajan (U.S. Patent

5,581,543).

25

Regarding claim 19, Meier ('436) discloses "...an information packet received

from a neighbor source, the information packet identifying the source as a stub router

and specifying route types that the source will advertise (col. 3, lines 65-col. 4, lines 1-2

and 9-19 where the HELLO packet is the information packet which identifies the sender

5   as a stub router by indicating its type and that it is 0 hops from itself)..."

However, Meier ('436) lacks what Natarajan discloses, "a computer program

product for determining route redistribution at a device within a network, the product

comprising (col. 3, lines 9-14)...code that prepares query packets requesting route

information only to neighboring devices that have not been identified as stub routers

10   upon receiving notice of a failed connection (col. 9, lines 65-col. 10, lines 1-18 where

the process of evaluating the different switching nodes requires messages (queries) to

be sent back and forth between nodes to derive the necessary information, further this

is only done with the switching nodes, which as seen in figure 1 are only nodes

contained in element 30, gateway 22 (the stub router) is not part of this process as

15   described); and a computer-readable storage medium for storing the codes (col. 3, lines

9-14)."

It would have been obvious to one with ordinary skill in the art at the time of

invention to include the computer code and querying of nodes after notice of a failure for

the purpose of regenerating routes of the network. The motivation for regenerating

20   routes in a network because of a failure is to avoid the failure and thus keep

communication flowing.

Although claim 1 is a method claim and claim 21 is an apparatus claim, they both have limitations similar to those of claim 19. Therefore, claims 1 and 21 are rejected for the same reasons and motivation as in claim 19.

5   Regarding claim 20, Meier ('436) and Natarajan disclose the computer program of claim 19. However, Meier ('436) lacks what Natarajan further discloses, "the computer readable medium is selected from the group consisting of... system memory (col. 3, lines 11-14)..." It would have been obvious to one with ordinary skill in the art to include the system memory for storing the program for the same reasons and

10   motivation as in claim 19.

Regarding claim 2, Meier ('436) and Natarajan disclose the method of claim 1. However, Natarajan lacks what Meier ('436) further discloses, "wherein receiving an information packet comprises receiving a hello packet containing peer information (col.

15   3, lines 65-col..4, lines 1-2 and 9-19)." It would have been obvious to one with ordinary skill in the art to include the hello packet for the same reasons and motivation as in claim 1.

Regarding claim 4, Meier ('436) and Natarajan disclose the method of claim 1.

20   However, Meier ('436) lacks what Natarajan further discloses "the network has a hub and spoke arrangement and the device is a hub and the stub router (figure 1, where, for example, element 37 is the device which represents a hub with spokes 34, 38, and the

gateway (stub router))." It would have been obvious to one with ordinary skill in the art to include the hub and spoke arrangement for the same reasons and motivation as in claim 1.

5   Regarding claims 6, 7, and 8, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) and Natarajan do no explicitly disclose the advertised routes are "connected routes (claim 6)", "summary routes (claim 7)", or "static routes (claim 8)". Although the route types advertised are not explicitly disclosed, it would have been obvious to one with ordinary skill in the art at the time of invention to have any

10   three routes (connected, summary, or static) advertised as a matter of design choice. The choice of routes the source will advertise is completely dependent upon the designer of the system. The motivation for choosing the type of route is a preference of the designer and one route type obviously holds no distinct advantage over the others, as applicant has included all three in the dependent claims.

15

Regarding claim 9, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) lacks what Natarajan discloses, "wherein the device and the neighboring devices have point-to-point links (figure 1, the elements in element 30)." It would have been obvious to one with ordinary skill in the art to include the point-to-point

20   links for the same reasons and motivation as in claim 1.

Regarding claim 10, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) and Natarajan do not explicitly disclose "wherein the device and the neighboring devices have multipoint links." Although the multipoint links are not disclosed in either Meier ('436) or Natarajan, it would have been obvious to one with

5   ordinary skill in the art at the time of invention to have multipoint links as a matter of design choice. As seen in figure 1 of Natarajan, the network operates using point-to-point links. However, one of ordinary skill in the art would recognize that a multipoint network could also be used as the network. The motivation for choosing between a point-to-point network and multipoint network is a preference of the designer and the

10   system design.

Regarding claim 11, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) lacks what Natarajan discloses, "wherein only one neighboring device is a stub router (figure 1, device 37 has only one neighbor that is a stub router,

15   i.e. gateway 22)." It would have been obvious to one with ordinary skill in the art to include the only one stub router neighboring the device for the same reasons and motivation as in claim 1.

Regarding claim 12, Meier ('436) and Natarajan disclose the method of claim 1.

20   However, Meier ('436) and Natarajan do not explicitly disclose "wherein multiple neighboring devices are stub routers." Although neither Meier ('436) nor Natarajan disclose the multiple neighbors as stub routers, Natarajan does suggest that element 28

can also act as a gateway (col. 2, lines 51-52). This means, for example, if figure 1,

element 30 had only one switching node, then the device (the switching node) would

have multiple stub routers connected to it. It would have been obvious to one with

ordinary skill in the art to see that this scenario is possible and that there would

5   therefore be multiple stub routers connected to the devices of the network. The

motivation for having multiple stub routers is again a designer preference and a function

of the network.

Regarding claim 13, Meier ('436) and Natarajan disclose the method of claim 1.

10   However, Meier ('436) lacks what Natarajan discloses, "wherein the device is a router

(figure 1, any element node in figure 30 acts as a routing device as suggested by the

multiple paths of each node, thus implying that the node must route the data out the

appropriate path)." It would have been obvious to one with ordinary skill in the art to

have the device consist of a router for the same reasons and motivation as in claim 1.

15

Claims 14, 15, 17, 22-24, 26-30, 32, 34, and 36 are rejected under 35 U.S.C.

103(a) as being unpatentable over Meier (U.S. Patent 5,673,031) in view of Natarajan.

Regarding claim 23, Meier ('031) discloses "... information received at a router

20   which identities the router as a stub router (col. 12, lines 35-42 where the administrator

informs the router that it is the root node or stub router); an information packet to be

sent from the stub router to neighboring devices, the information packet identifying the

source as a stub router and specifying route types that the stub router will advertise (col. 13, lines 23-42 where the HELLO packet is the information packet which identifies the sender as a stub router by indicating its type through the source address)..."

However, Meier ('031) lacks what Natarajan discloses, "a computer program

5   product for reducing query regenerations for route distribution within a network (col. 3, lines 9-14)... code that prepares a response packet to be sent with routes identified as inaccessible upon receiving a query for route information other than the type specified in the information packet (col. 9, lines 65-col. 10, lines 1-18 where the process of evaluating the different switching nodes requires messages (queries) to be sent back

10   and forth between nodes to derive the necessary information, further this is only done with the switching nodes, which as seen in figure 1 are only nodes contained in element 30, gateway 22 (the stub router) is not part of this process as described); and a computer-readable storage medium for storing the codes (col. 3, lines 9-14)."

It would have been obvious to one with ordinary skill in the art at the time of

15   invention to include the computer code and querying of nodes after notice of a failure for the purpose of regenerating routes of the network. The motivation for regenerating routes in a network because of a failure is to avoid the failure and thus keep communication flowing.

20   Although claim 14 is a method claim and claims 22 and 24 are apparatus claims, they all have limitations similar to those of claim 23. Therefore, claims 14, 22, and 24 are rejected for the same reasons and motivation as in claim 23.

Regarding claims 15 and 32, Meier ('031) and Natarajan disclose the method of

claim 14 and the system of claim 22. However, Meier ('031) lacks what Natarajan

further discloses "the network has a hub and spoke arrangement and the device is a

5   hub and the stub router (figure 1, where, for example, element 37 is the device which

represents a hub with spokes 34, 38, and the gateway (stub router))." It would have

been obvious to one with ordinary skill in the art to include the hub and spoke

arrangement for the same reasons and motivation as in claims 14 and 22.

10   Regarding claims 17 and 36, Meier ('031) and Natarajan disclose the method of

claim 14 and the system of claim 22. However, Natarajan lacks what Meier ('031)

further discloses, "wherein sending an information packet comprises transmitting a hello

packet (col. 13, lines 23-42)." It would have been obvious to one with ordinary skill in the

art to include the hello packet for the same reasons and motivation as in claims 14 and

15   22.

Regarding claim 34, Meier ('031) and Natarajan disclose the system of claim 22.

However, Meier ('436) and Natarajan do no explicitly disclose the advertised routes are

"connected routes". Although the route types advertised are not explicitly disclosed, it

20   would have been obvious to one with ordinary skill in the art at the time of invention to

have connected routes advertised as a matter of design choice. The choice of routes

the source will advertise is completely dependent upon the designer of the system. The

motivation for choosing the type of route is a preference of the designer and dependent

on the system.

        Regarding claims 26, 27, 28, 29, and 30, Meier ('031) discloses "a computer-

5   implemented method for route redistribution within a network, the method comprising:

receiving information at a router identifying the router as a stub router (col. 12, lines 35-

42 where the administrator informs the router that it is the root node or stub router)..."

        However, Meier ('031) lacks what Natarajan discloses, "limiting an amount of

route information sent by the stub router to a neighboring device in response to a query

10   for route information (figure 9, element 116 whereby creating a shortest path definition

that does not include the failed link, Natarajan has limited an amount of route

information sent by the stub router to neighboring devices)..."

        It would have been obvious to one with ordinary skill in the art at the time of

invention to include the computer code and querying of nodes after notice of a failure for

15   the purpose of regenerating routes of the network. The motivation for regenerating

routes in a network because of a failure is to avoid the failure and thus keep

communication flowing.

        It is further noted that Meier ('031) and Natarajan also do not explicitly disclose

"...wherein the limiting the route information sent by the stub router comprises limiting

20   the route information to..." "only connected routes (claim 26)", "only summary routes

(claim 27)", "only static routes (claim 28)", "only internal routes (claim 29)", or "only

external routes (claim 30)".

Although the route types advertised are not explicitly disclosed, it would have

been obvious to one with ordinary skill in the art at the time of invention to have any of

the five routes (connected, summary, static, internal, or external) advertised as a matter

of design choice. The choice of routes the source will advertise is completely dependent

5   upon the designer of the system. The motivation for choosing the type of route is a

preference of the designer and one route type obviously holds no distinct advantage

over the others, as applicant has included all three in the dependent claims.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier

10   ('436) and Natarajan as applied to claim 1 above, and further in view of applicant's

admitted prior art (AAPA).

Regarding claim 3, Meier ('436) and Natarajan disclose the method of claim 1.

However, Meier ('436) and Natarajan lack what AAPA discloses, "wherein the device

and stub router are configured for EIGRP (specification, page 2, lines 9-20 where it is

15   strongly suggested that gateways (stub routers) as well as other devices (namely

routers) can be configured for EIGRP)." It would have been obvious to one with ordinary

skill in the art at the time of invention to have the stub router and device configured for

EIGRP for the purpose of providing a way to update routes of a network with information

from only neighboring nodes required. The motivation for updating routes of a network

20   with neighboring node information only is to save resources by not updating the entire

network.

Claims 18 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Meier ('031) and Natarajan as applied to claims 14 and 22 above, and further in

view of applicant's admitted prior art (AAPA).

Regarding claims 18 and 31, Meier ('031) and Natarajan disclose the method of

5   claim 14 and the system of claim 22. However, Meier ('031) and Natarajan lack what

AAPA discloses, "wherein the device and stub router are configured for EIGRP

(specification, page 2, lines 9-20 where it is strongly suggested that gateways (stub

routers) as well as other devices (namely routers) can be configured for EIGRP)." It

would have been obvious to one with ordinary skill in the art at the time of invention to

10   have the stub router and device configured for EIGRP for the purpose of providing a

way to update routes of a network with information from only neighboring nodes

required. The motivation for updating routes of a network with neighboring node

information only is to save resources by not updating the entire network.

15   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier

('436) and Natarajan as applied to claim 1 above, and further in view of Shrader (U.S.

Patent 5,864,666).

Regarding claim 5, Meier ('436) and Natarajan disclose the method of claim 1.

However, Meier ('436) and Natarajan lack what Shrader discloses, "where the network

20   includes a dual homed host (figure 2, element 100 as described in col. 4, lines 30-37)."

It would have been obvious to one with ordinary skill in the art at the time of invention to

include the dual home host configuration as in Shrader for the purpose of providing a

way to connect two networks (or other devices for that matter) and provide a firewall.

The motivation for providing a firewall between two networks or devices is so that there

is relative security between the networks or devices.

5   Claims 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Meier ('031) and Natarajan as applied to claims 14 and 22 above, and further in

view of Shrader (U.S. Patent 5,864,666).

Regarding claims 33 and 35, Meier ('031) and Natarajan disclose the method of

claim 14 and the system of claim 22. However, Meier ('031) and Natarajan lack what

10   Shrader discloses, "where the network includes a dual homed host (figure 2, element

100 as described in col. 4, lines 30-37)." It would have been obvious to one with

ordinary skill in the art at the time of invention to include the dual home host

configuration as in Shrader for the purpose of providing a way to connect two networks

(or other devices such as any router for that matter) and provide a firewall. The

15   motivation for providing a firewall between two networks or devices is so that there is

relative security between the networks or devices.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joshua Kading whose telephone number is (571) 272-

20   3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone
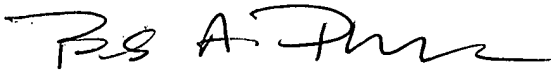
number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

5 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10

/Joshua Kading
Examiner
Art Unit 2661

October 20, 2004

BOB PHUNKULH   10/20/04
PRIMARY EXAMINER